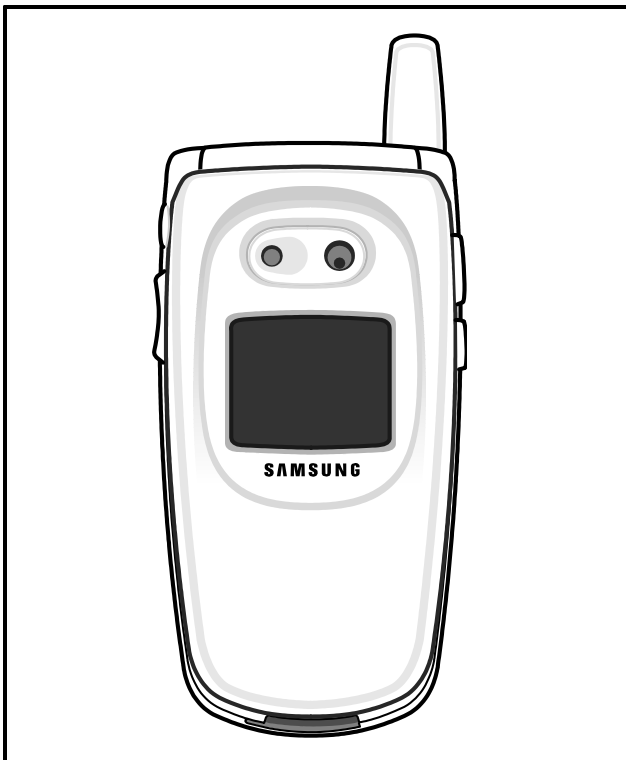


SAMSUNG

**GSM TELEPHONE
SGH-P510**

***SERVICE* Manual**

GSM TELEPHONE



CONTENTS

1. Specification
2. Flow Chart of Troubleshooting
3. Exploded Views and Parts List
4. Electrical Parts List
5. Block Diagrams
6. PCB Diagrams

1. SGH-P510 Specification

1. GSM General Specification

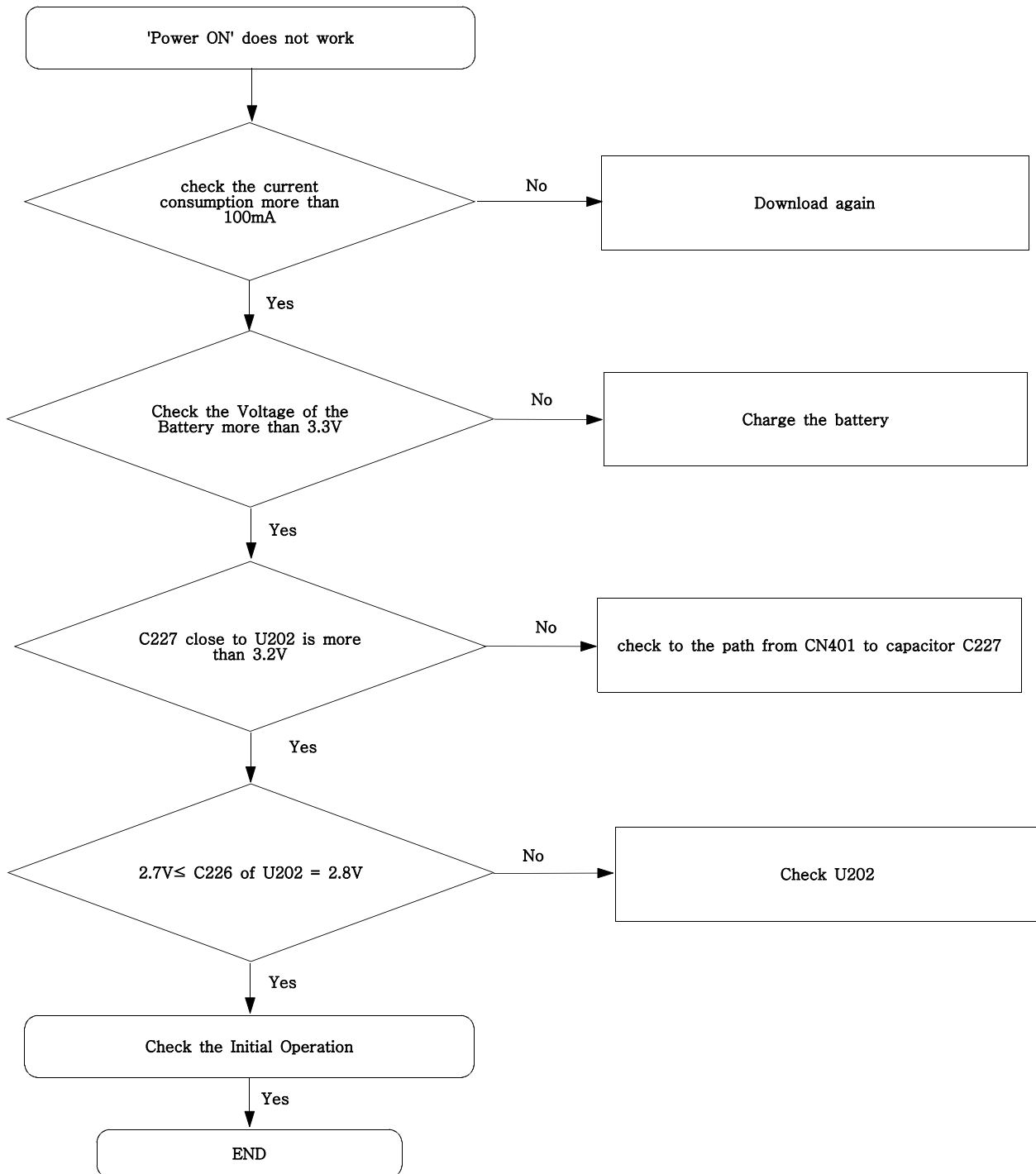
	GSM900 Phase 1	EGSM 900 Phase 2	DCS 1800 Phase 1
Freq. Band [MHz] Uplink/Downlink	890~915 935~960	880~915 925~960	1710~1785 1805~1880
ARFCN range	1~124	0~124 & 975~1023	512~885
Tx/Rx spacing	45MHz	45MHz	95MHz
Mod. Bit rate / Bit Period	270.833kbps 3.692us	270.833kbps 3.692us	270.833kbps 3.692us
Time Slot Period / Frame Period	576.9us 4.615ms	576.9us 4.615ms	576.9us 4.615ms
Modulation	0.3GMSK	0.3GMSK	0.3GMSK
MS Power	33dBm~13dBm	33dBm~5dBm	30dBm~0dBm
Power Class	5pcl ~ 15pcl	5pcl ~ 19pcl	0pcl ~ 15pcl
Sensitivity	-102dBm	-102dBm	-100dBm
TDMA Mux	8	8	8
Cell Radius	35Km	35Km	2Km

2. GSM Tx Power Class

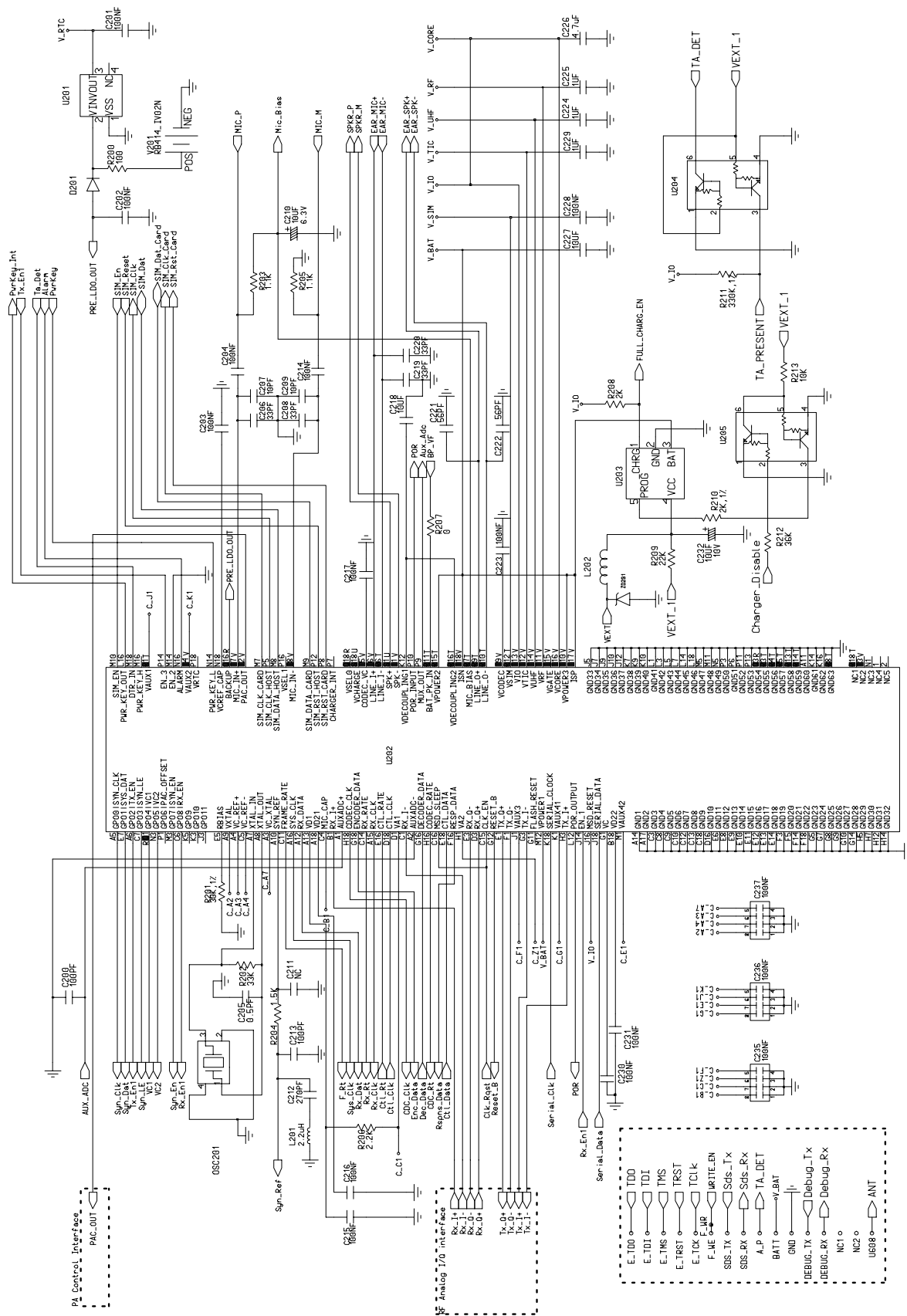
Tx Power control level	GSM900	Tx Power control level	DCS1800
5	33±3 dBm	0	30±3 dBm
6	31±3 dBm	1	28±3 dBm
7	29±3 dBm	2	26±3 dBm
8	27±3 dBm	3	24±3 dBm
9	25±3 dBm	4	22±3 dBm
10	23±3 dBm	5	20±3 dBm
11	21±3 dBm	6	18±3 dBm
12	19±3 dBm	7	16±3 dBm
13	17±3 dBm	8	14±3 dBm
14	15±3 dBm	9	12±4 dBm
15	13±3 dBm	10	10±4 dBm
16	11±3 dBm	11	8±4 dBm
17	9±3 dBm	12	6±4 dBm
18	7±3 dBm	13	4±4 dBm
19	5±3 dBm	14	2±5 dBm
		15	0±5 dBm

2. SGH-P510 Flow Chart of Troubleshooting

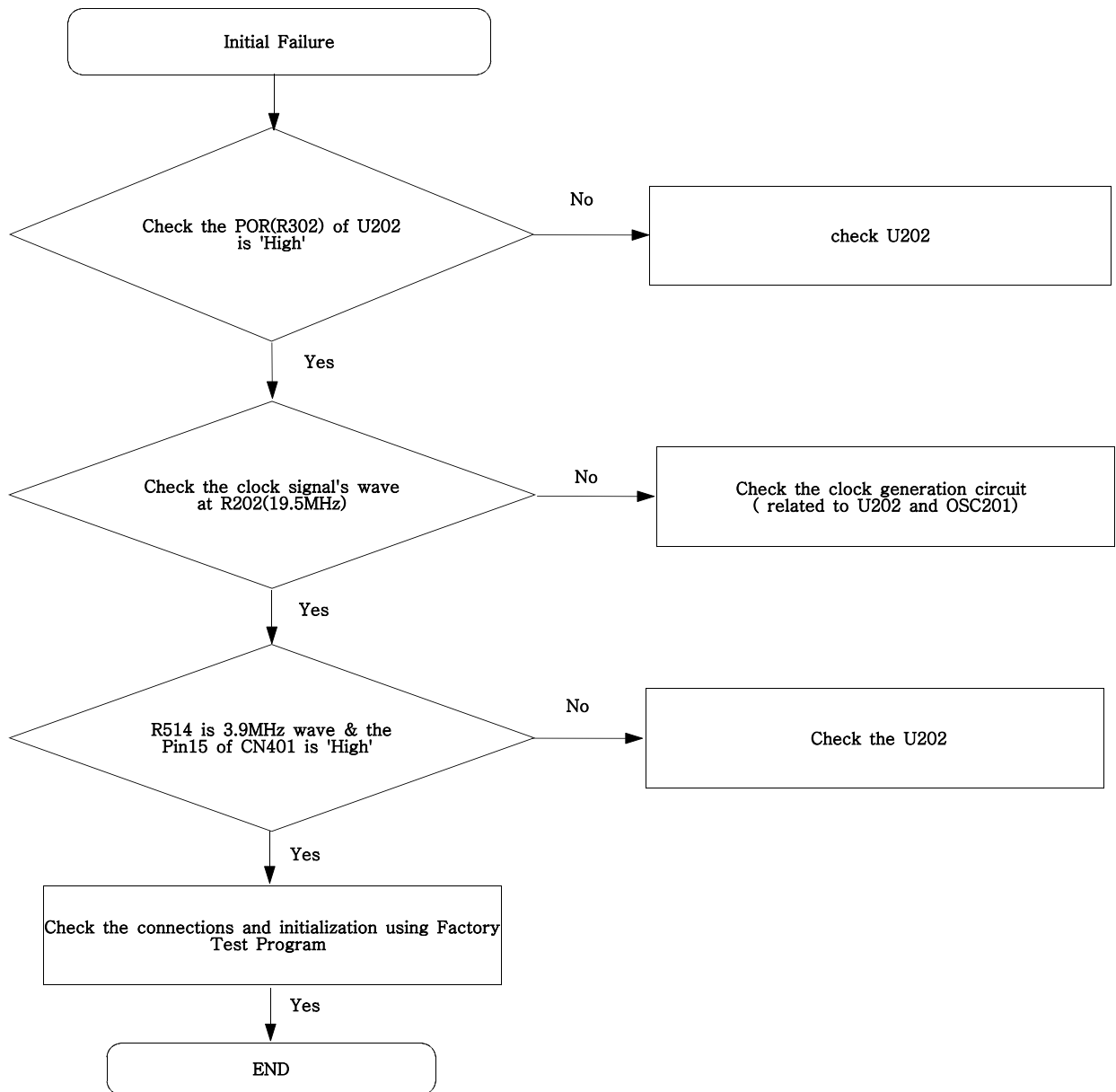
1. Power On

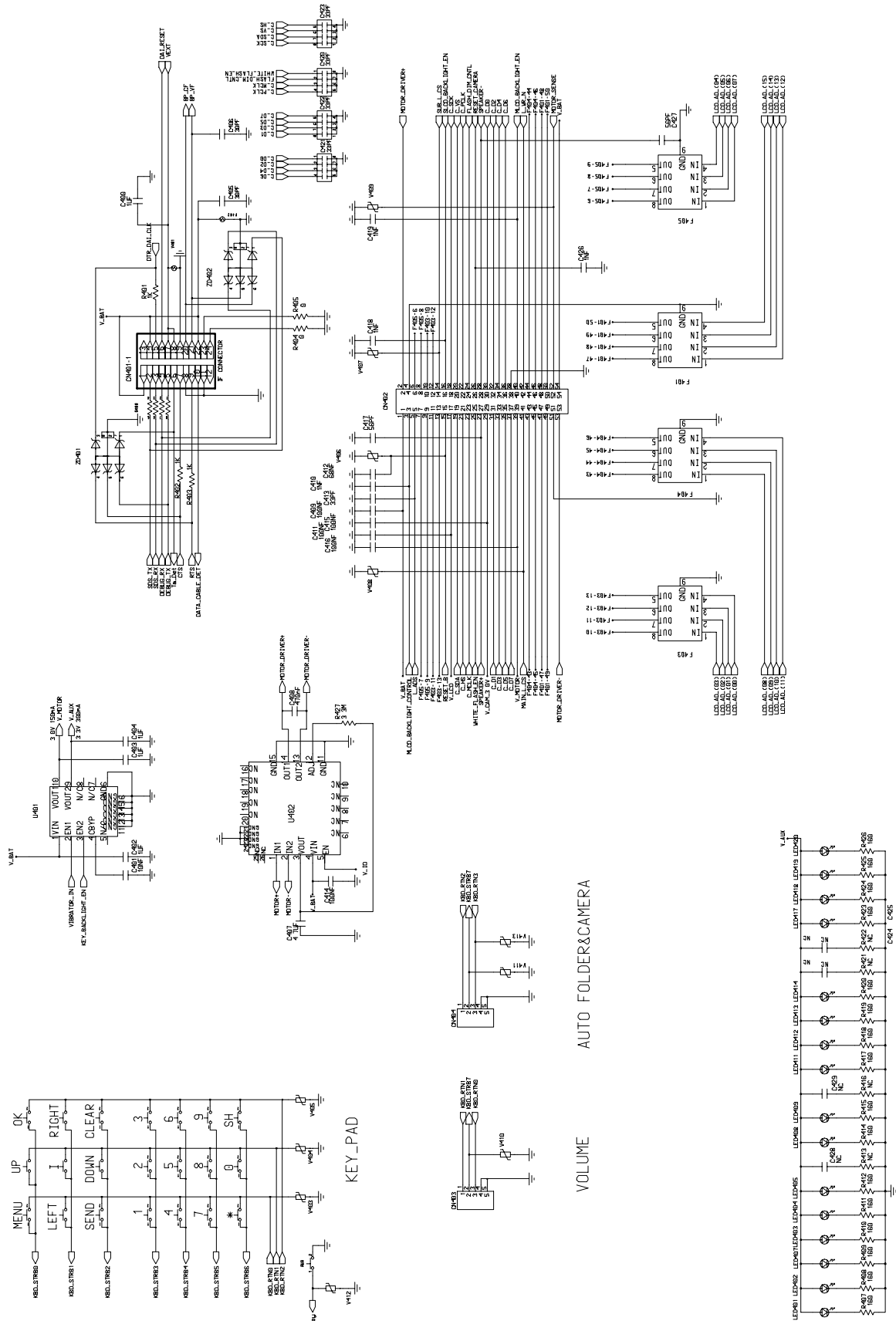


SGH-P510 Flow Chart of Troubleshooting and Circuit Diagrams



2. Initial

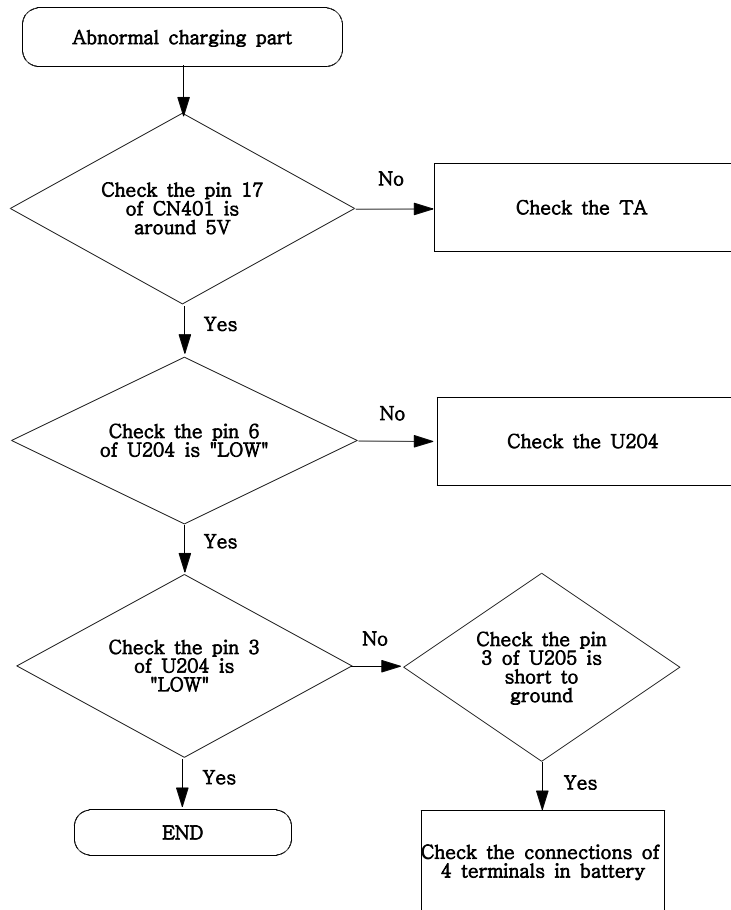




3. Charging

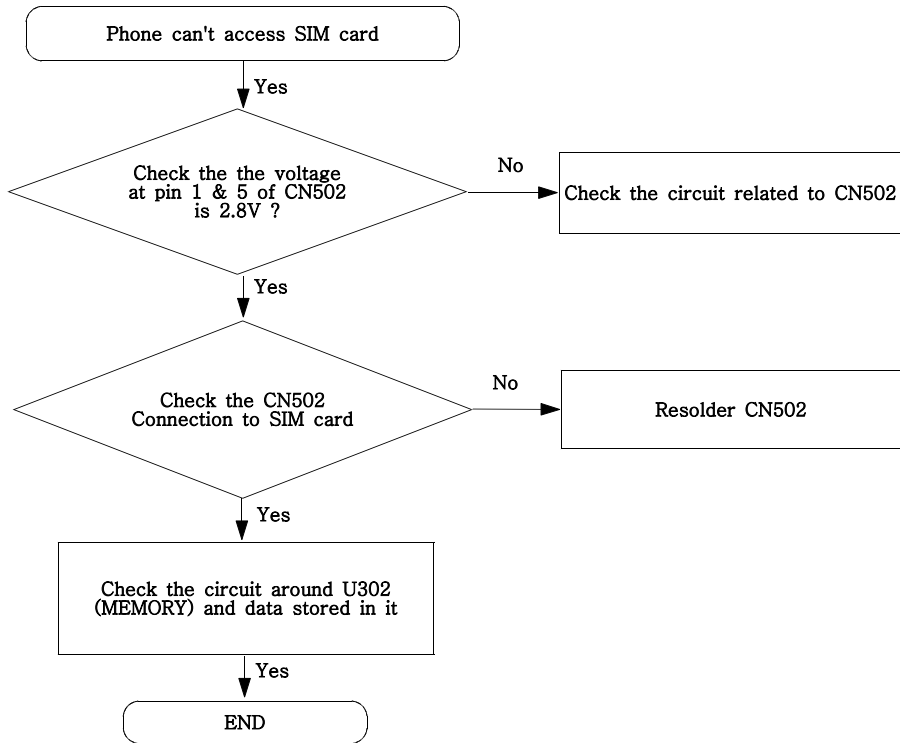
* Test after connecting with Battery

: All 4 terminals in battery should be connected to the phone by using jump-wires.



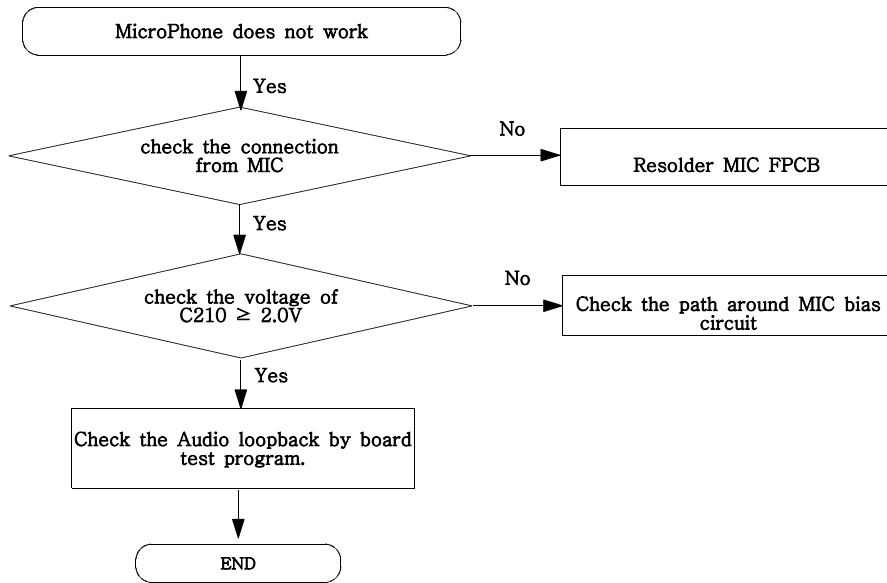
4. Sim

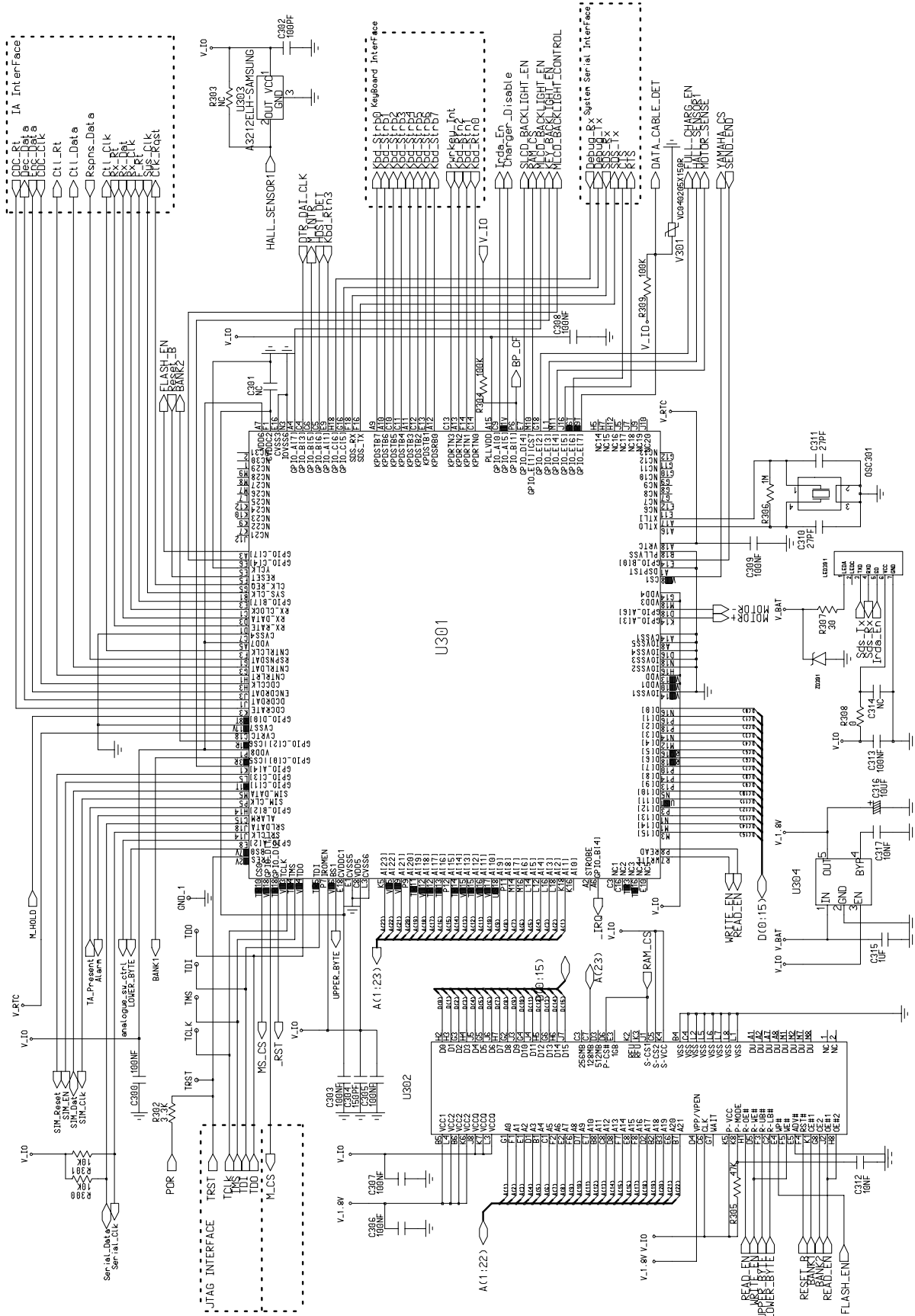
* Test with Sim

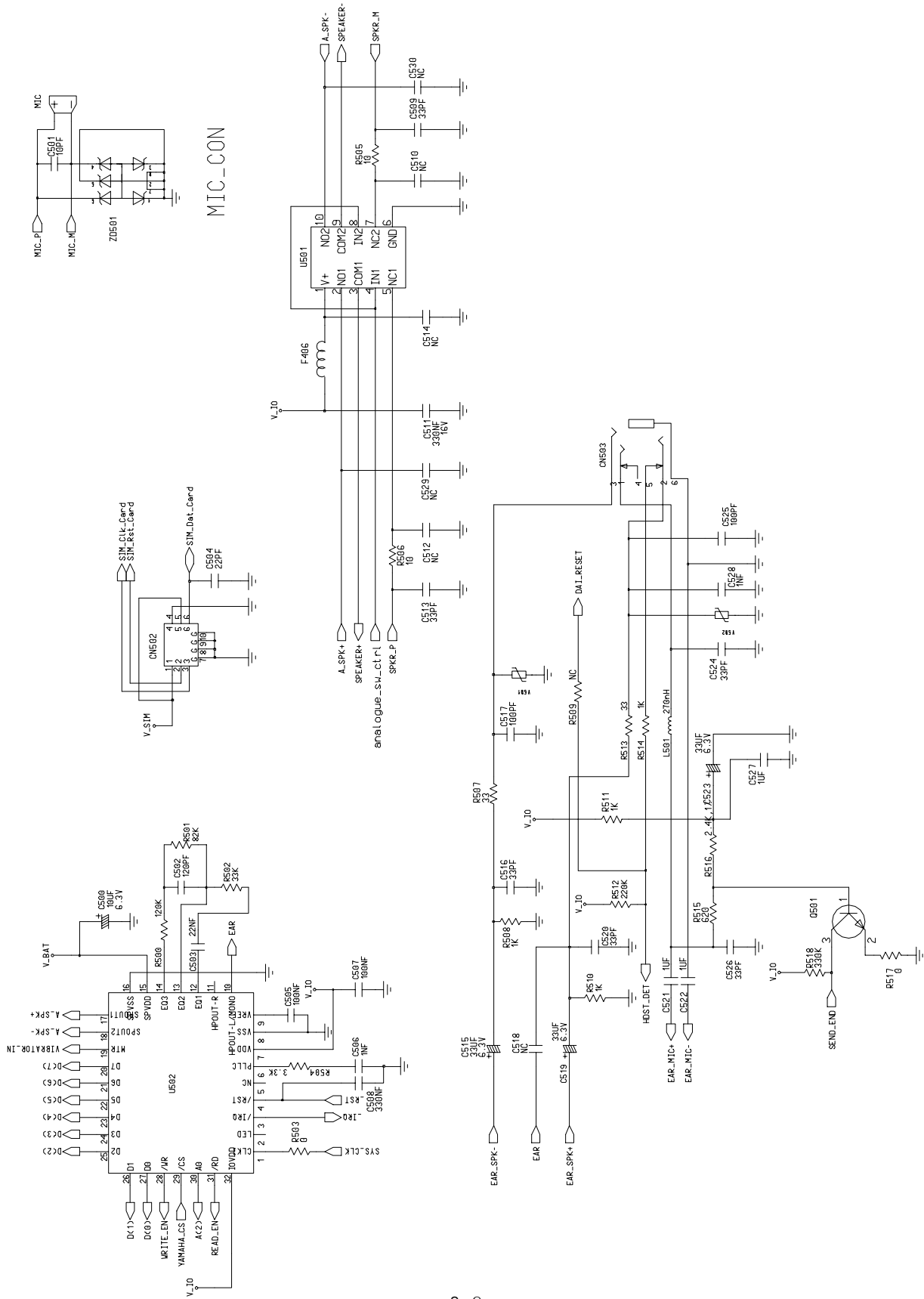


5. Microphone Part

* Call with Sim before testing.

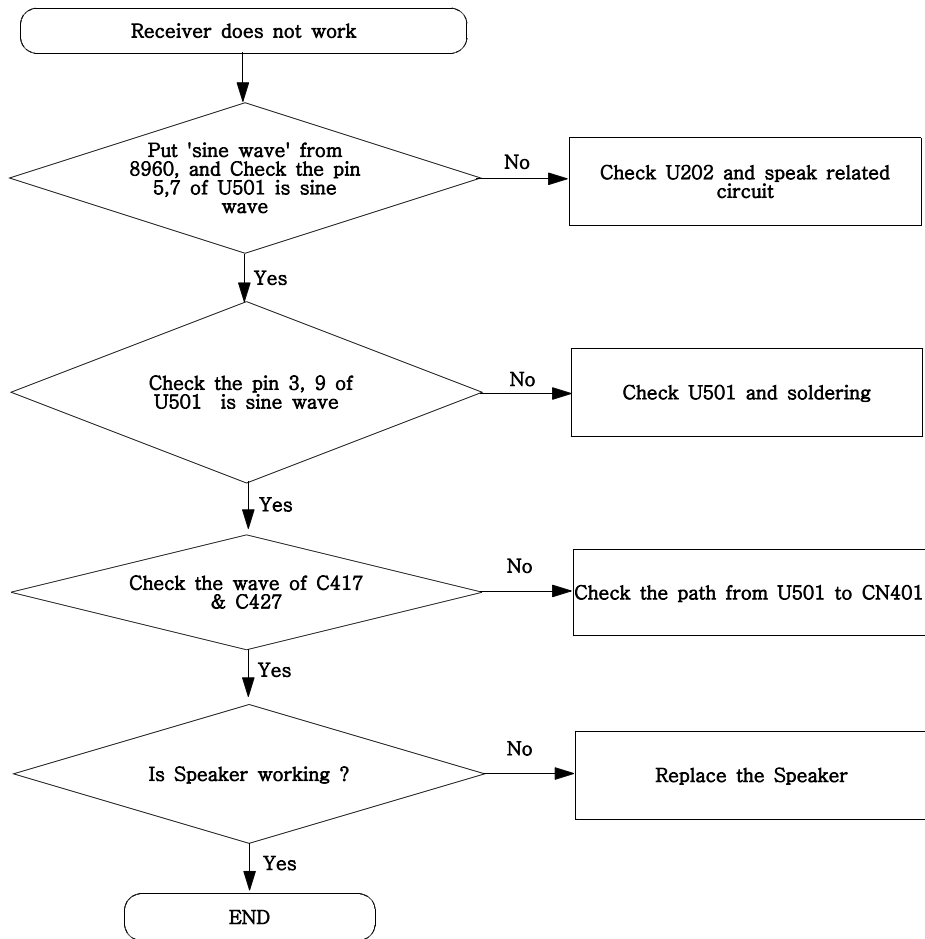






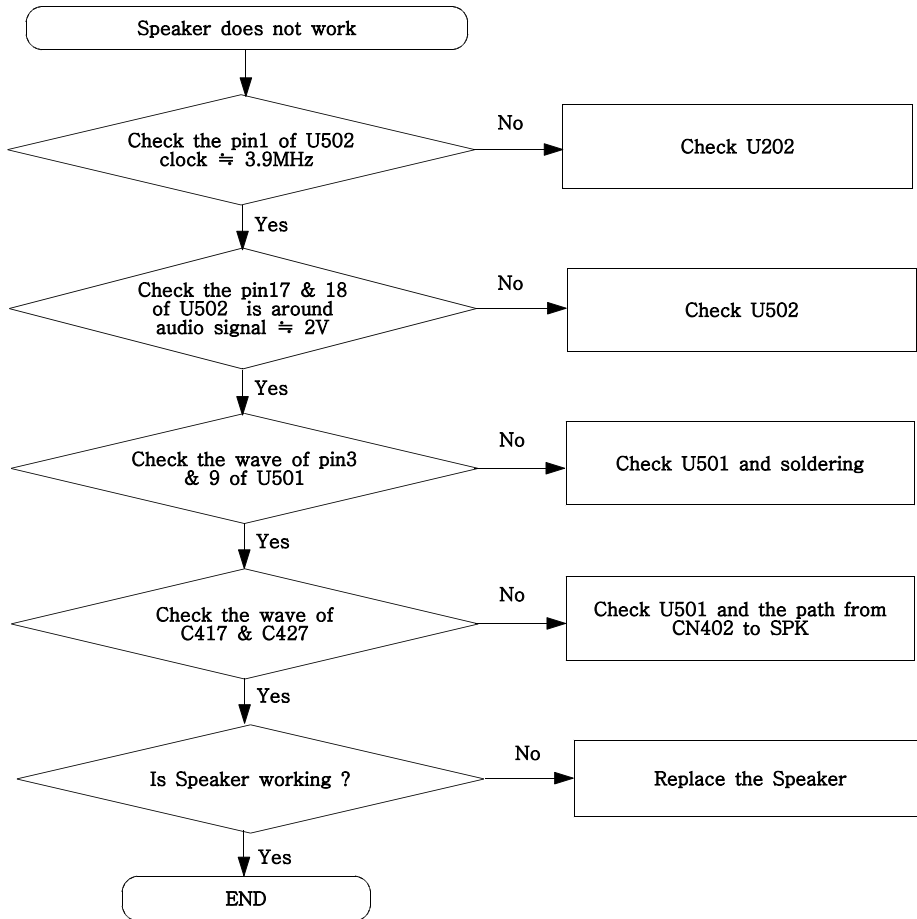
6. Receiver

* Call before testing.

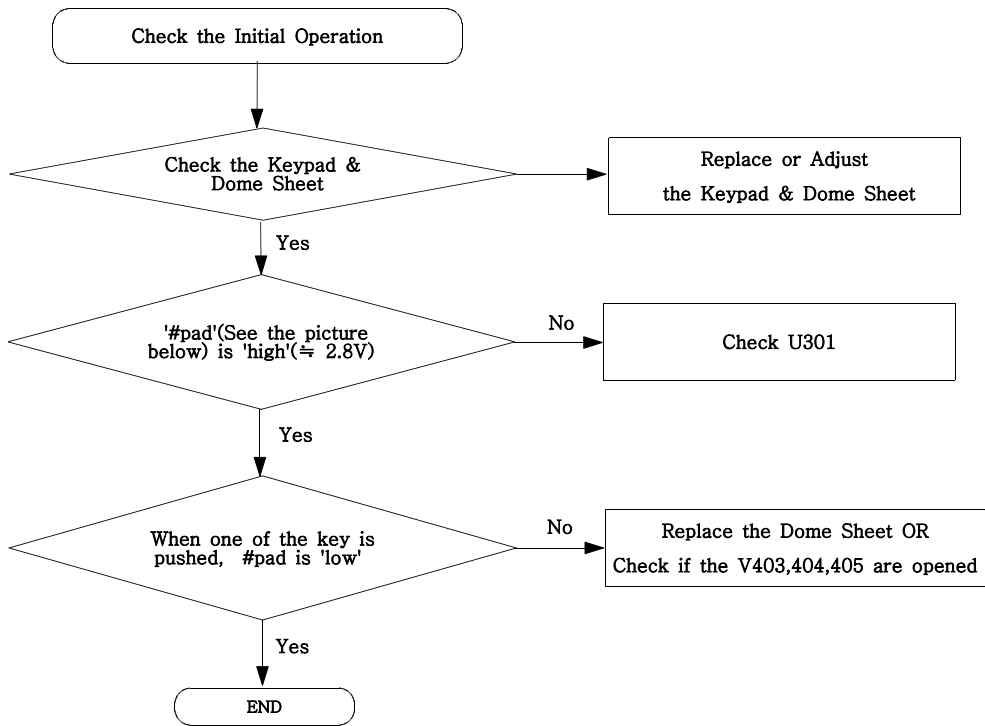


7. Speaker

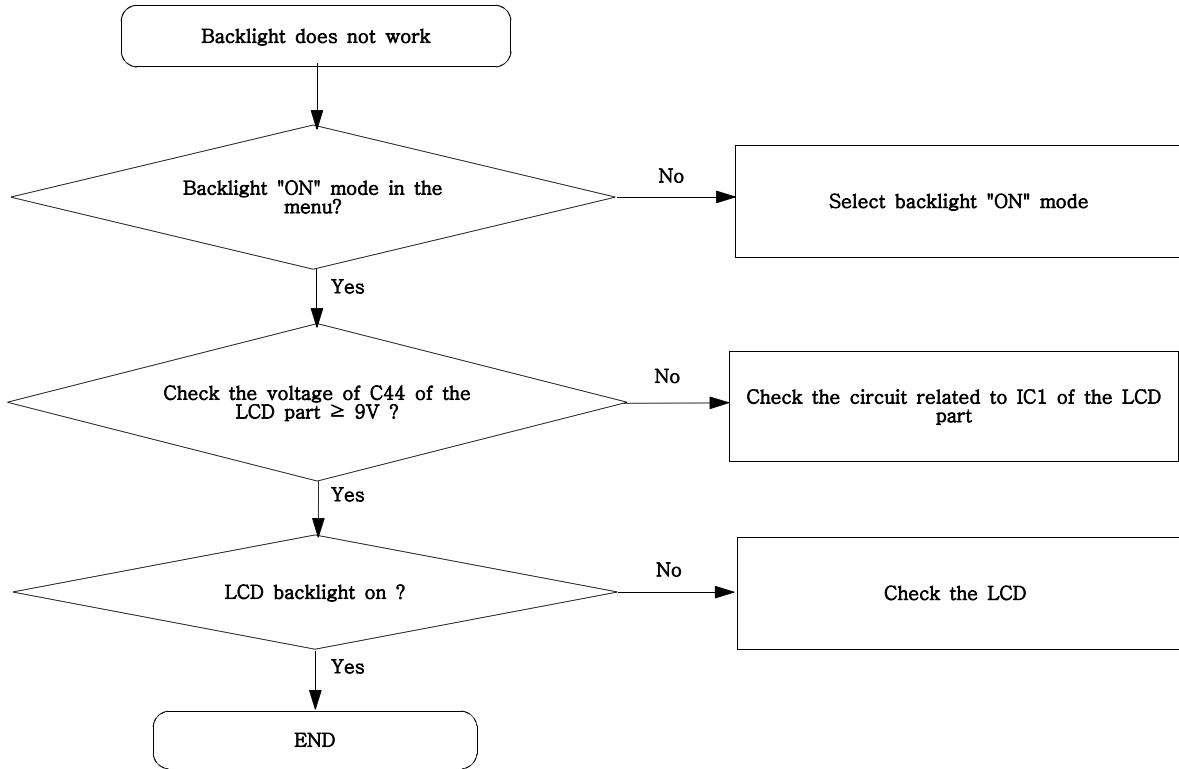
* Play on 64-poly melody before testing.

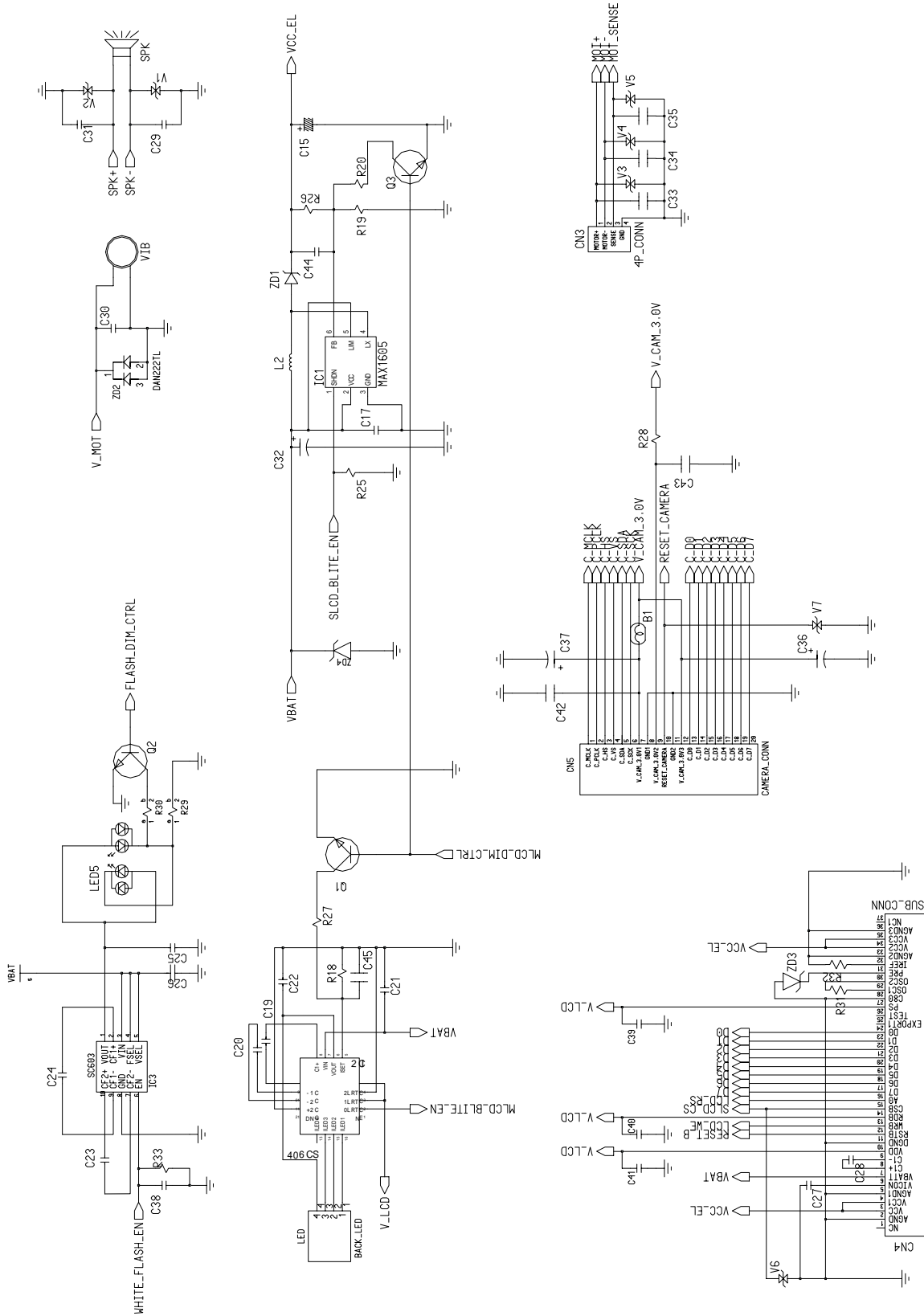


8. Key Data Input

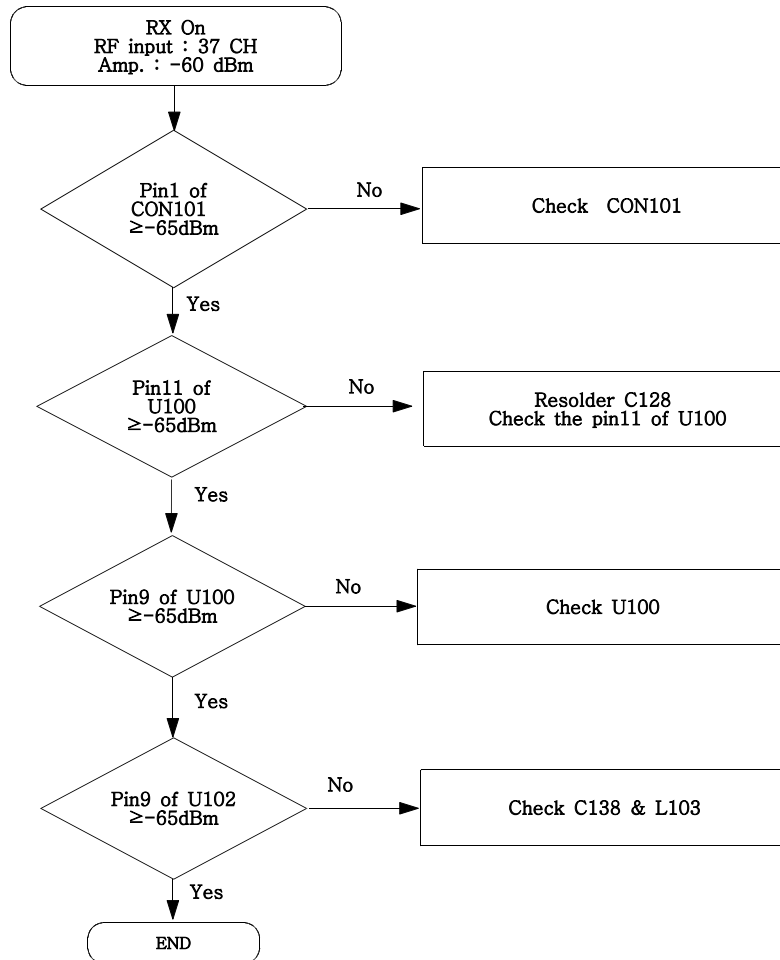


9. LCD backlight

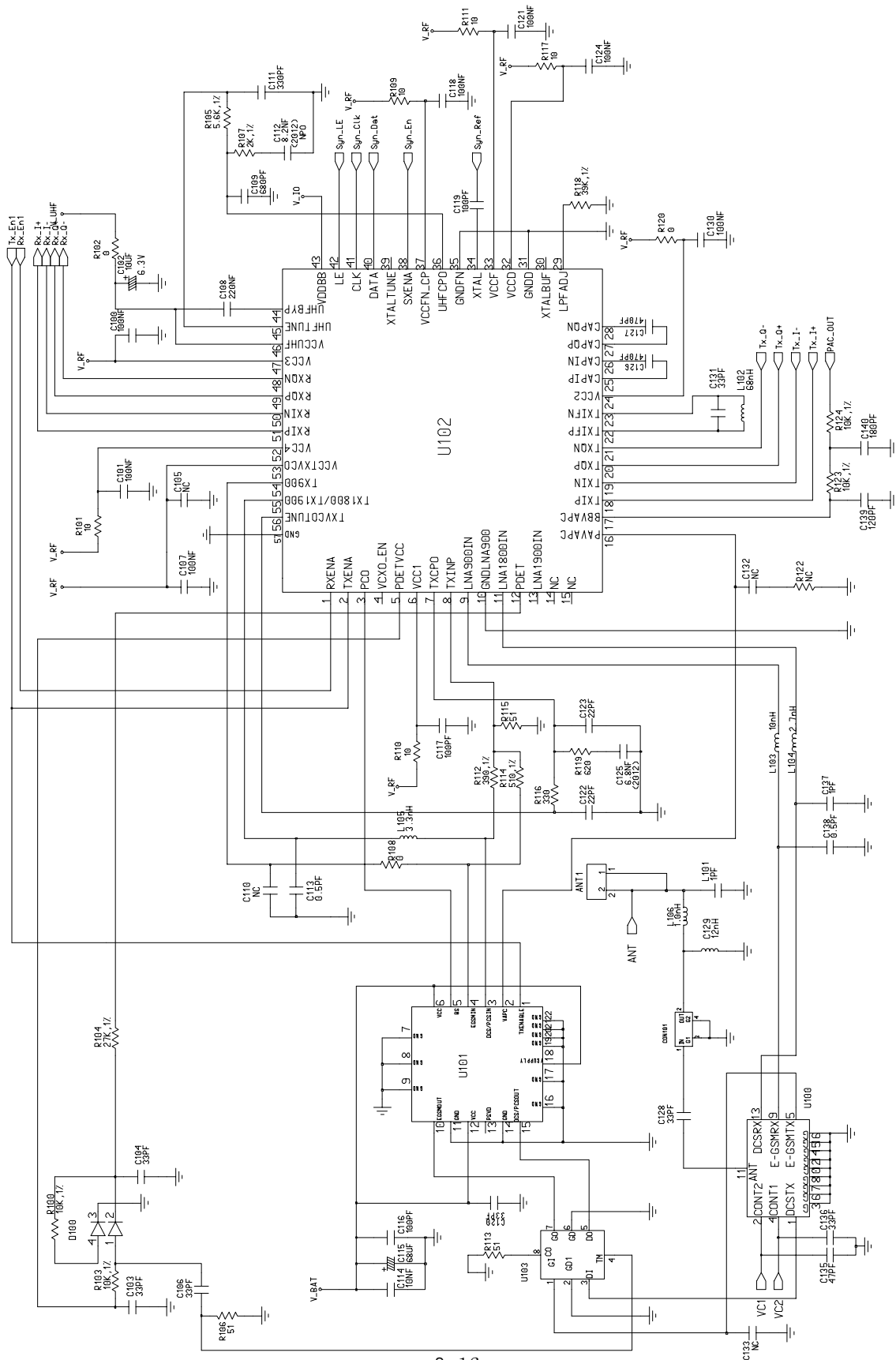




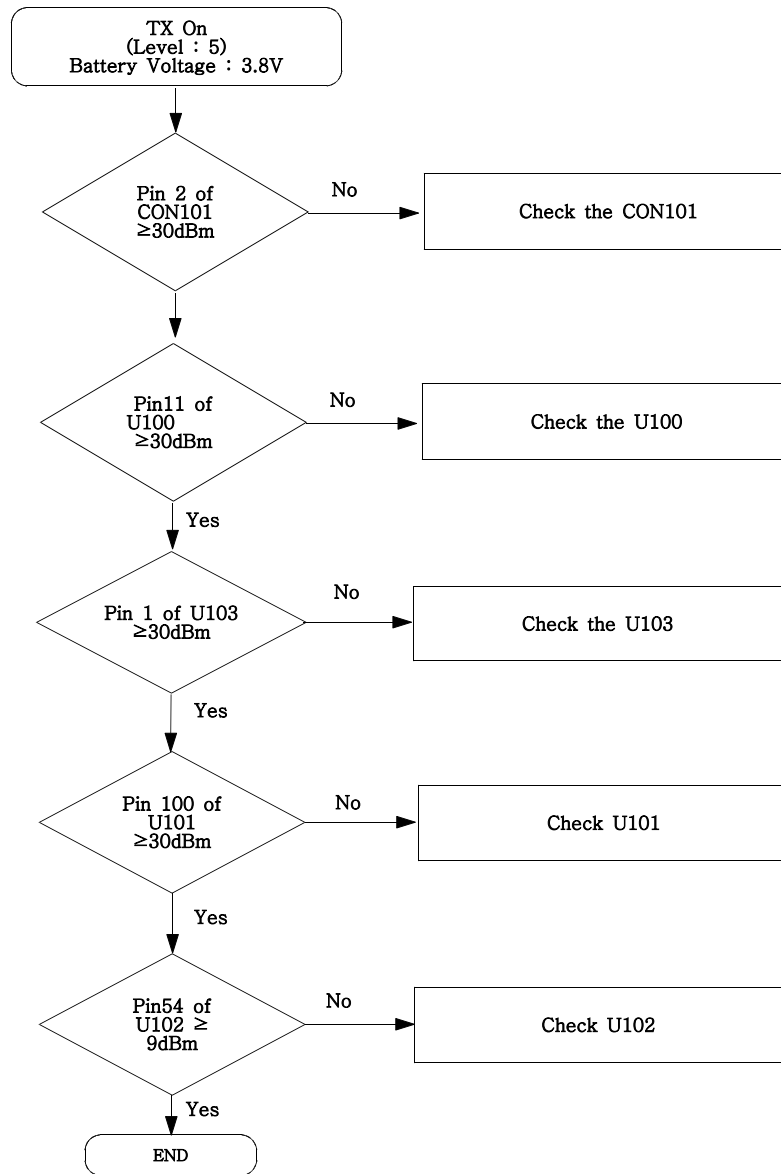
10. GSM Receiver



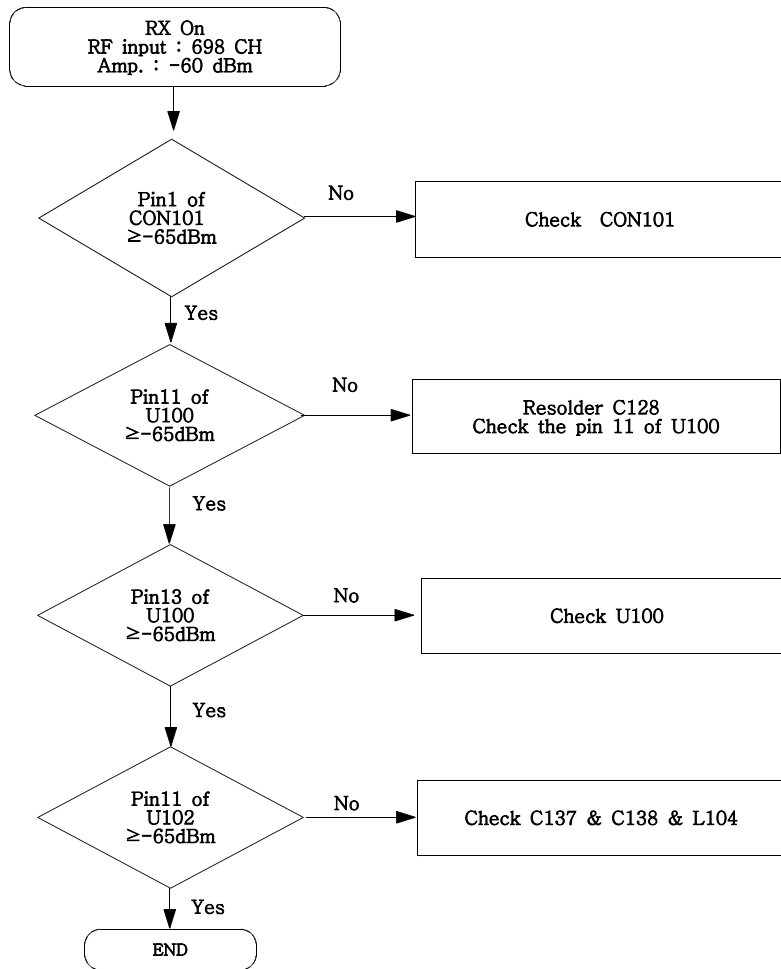
SGH-P510 Flow Chart of Troubleshooting and Circuit Diagrams



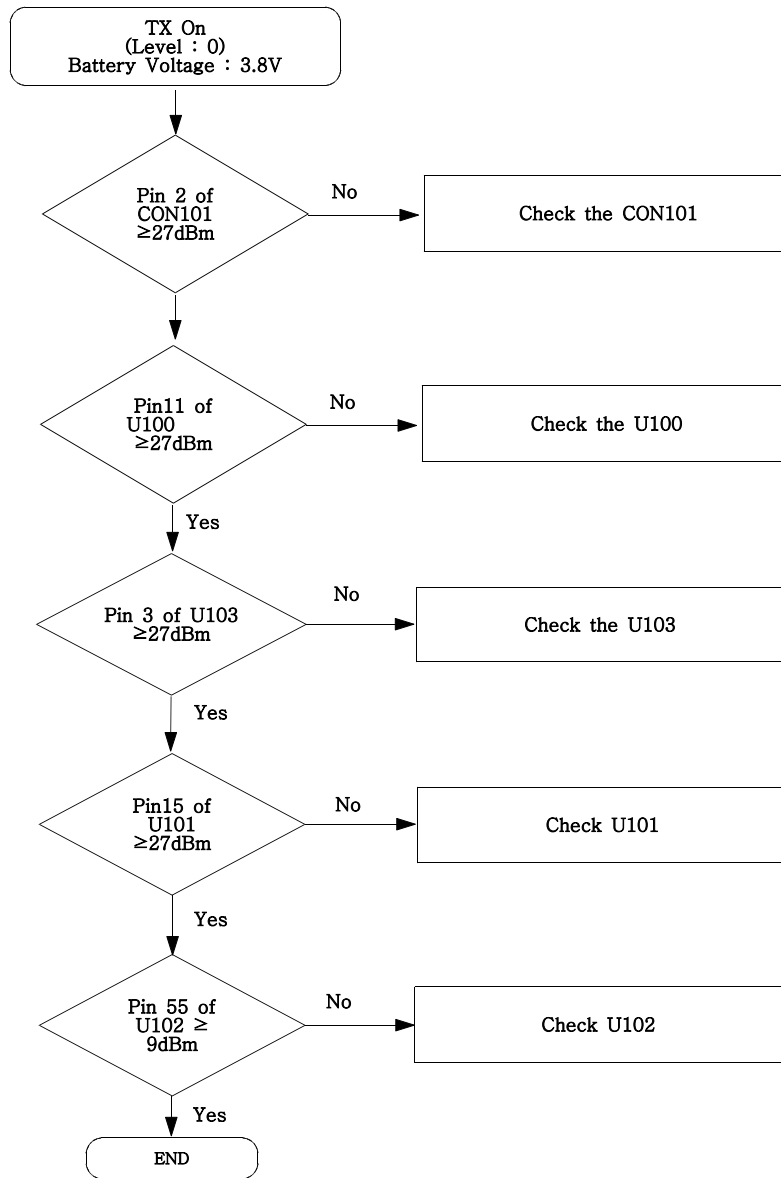
11. GSM Transmitter



12. DCS Receiver

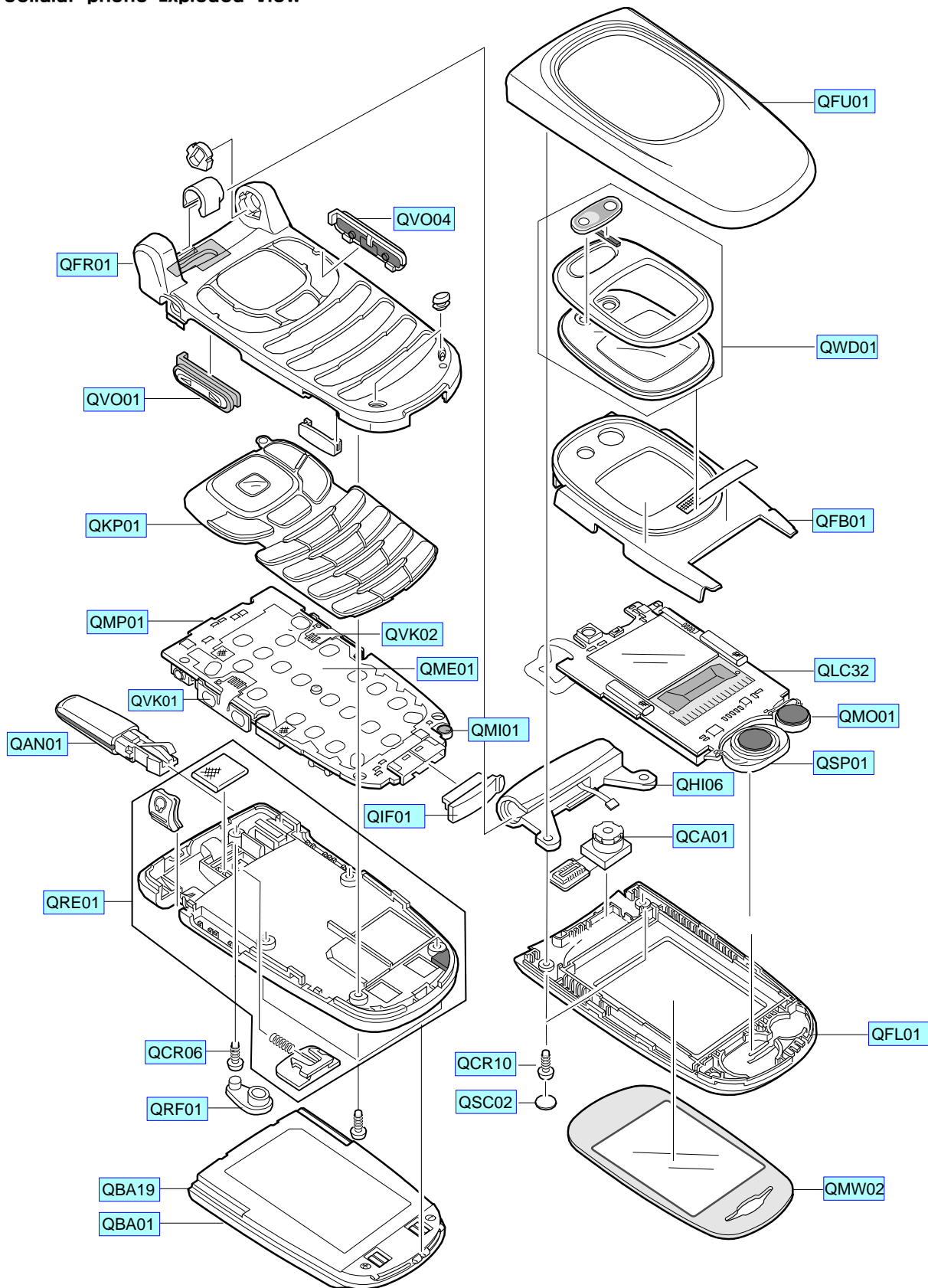


13. DCS Transmitter



3. SGH-P510 Exploded View and its Parts list

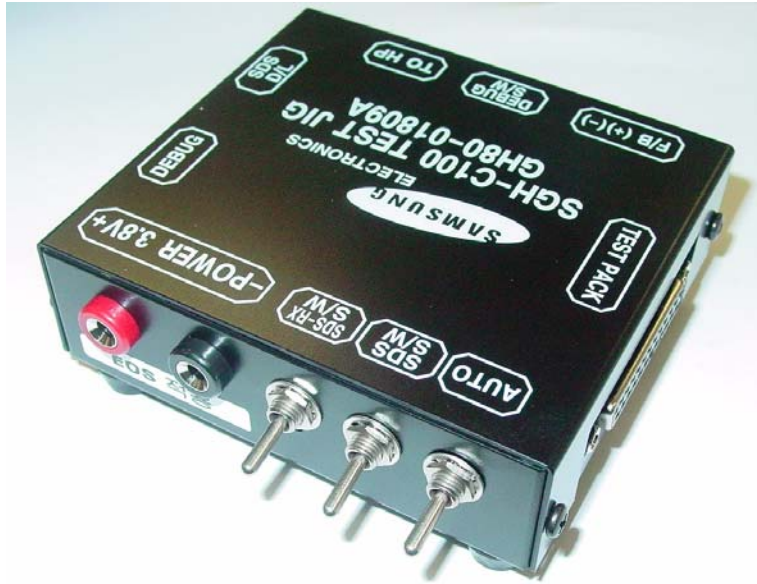
1. Cellular phone Exploded View



2. Cellular phone Parts list

Location NO.	Description	SEC CODE	Remark
QFU01	FOLDER UPPER	GH75-03310A	
QWD01	DUAL LCD WINDOW	GH75-03313A	
QFB01	FOLDER UPPER DUMMY	GH75-03312A	
QLC32	LCD	GH07-00412A	
QMO01	MOTOR	GH31-00084A	
QSP01	MICRO SPEAKER	3001-001461	
QCA01	CAMERA	GH59-01049A	
QHI06	UNIT AUTO FOLDER	GH59-00833A	
QFL01	FOLDER LOWER	GH75-03309A	
QMW02	MIAN LCD WINDOW	GH72-11471A	
QSC02	SCREW DUMMY	GH74-07794A	
QCR10	SCREW	6001-001633	
QFR01	FRONT COVER	GH75-03308A	
QVO01	VOL KEY ASSY	GH75-04347A	
QVO04	MEC-AUTO KEY ASSY	GH75-04332A	
QKP01	KEYASSY	GH75-03325A	
QMP01	MAIN PBA	GH92-01525A	
QME01	METAL DOME	GH59-00912A	
QVK01	UNIT VOLKEY	GH59-00911A	
QVK02	MINT METAL DOME	GH59-00914A	
QMI01	MICROPHONE-ASS'Y	GH30-00042A	
QAN01	ANTENNA	GH42-00326A	
QIF01	IF COVER	GH72-13056A	
QRE01	REAR COVER	GH75-03314A	
QRF01	PMO-SCREW RF DUMMY	GH72-09897A	
QCR06	SCREW	6001-001155	
QBA19	BATTERY 800MAH	GH43-00985A	
QBA01	BATTERY 1000MAH	GH43-00986A	

3. Test Jig [GH80-01809A]



**3-1. RF Test Cable
(GH39-00182A)**



**3-2. Test Cable
(GH39-00206A)**



3-3. Serial Cable



3-4. Power Supply Cable



**3-5. DATA CABLE
(GH39-00203A)**



**3-6. TA
(GH44-00482A)**



4. SGH-P510 MAIN Electrical Parts List

SEC Code	Design LOC
GH92-01525A	
GH96-01416A	
6001-001478	
GH30-00042A	
GH59-00911A	
GH59-00912A	
GH59-00914A	
GH68-02026A	
GH71-02049A	
GH74-07819A	
GH71-02208A	ANT 1
2203-005482	C100
2203-005482	C101
2404-001225	C102
2203-000812	C103
2203-000812	C104
2203-000812	C106
2203-005482	C107
2203-005496	C108
2203-001124	C109
2203-002443	C111
2203-006195	C112
2203-001383	C113
2203-000254	C114
2404-001306	C115
2203-000233	C116
2203-000233	C117
2203-005482	C118
2203-000233	C119
2203-000812	C120
2203-005482	C121
2203-000628	C122
2203-000628	C123
2203-005482	C124
2203-006351	C125
2203-000940	C126
2203-000940	C127
2203-000812	C128
2703-002199	C129

SEC Code	Design LOC
2203-005482	C130
2203-000812	C131
2203-000995	C135
2203-000812	C136
2203-005288	C137
2203-002668	C138
2203-000311	C139
2203-005503	C140
2203-000233	C200
2203-005061	C201
2203-005482	C202
2203-005482	C203
2203-005061	C204
2203-001383	C205
2203-000812	C206
2203-000278	C207
2203-000812	C208
2203-000278	C209
2404-001105	C210
2203-000654	C212
2203-000233	C213
2203-005061	C214
2203-005061	C215
2203-005061	C216
2203-005061	C217
2404-001225	C218
2203-000812	C219
2203-000812	C220
2203-001072	C221
2203-001072	C222
2203-005061	C223
2203-006053	C224
2203-006053	C225
2203-005664	C226
2404-001225	C227
2203-005061	C228
2203-006053	C229
2203-005482	C230
2203-005482	C231

SEC Code	Design LOC
2404-001268	C232
2503-001042	C235
2503-001042	C236
2503-001042	C237
2203-005061	C300
2203-000233	C302
2203-005061	C303
2203-000359	C304
2203-005061	C305
2203-005482	C306
2203-005482	C307
2203-005061	C308
2203-005061	C309
2203-000679	C310
2203-000679	C311
2203-000254	C312
2203-005061	C313
2203-006093	C315
2404-001225	C316
2203-000254	C317
2203-006053	C400
2203-000254	C401
2203-006053	C402
2203-006053	C403
2203-006053	C404
2203-001412	C405
2203-001412	C406
2203-006105	C407
2203-006257	C408
2203-005061	C409
2203-000438	C410
2203-005061	C411
2203-005483	C412
2203-000812	C413
2203-005482	C414
2203-005061	C415
2203-005061	C416
2203-001072	C417
2203-000438	C418

SCH- P510 MAIN Electrical Parts List

SEC Code	Design LOC
2203-000438	C419
2203-006113	C420
2203-006113	C421
2203-006113	C422
2203-006113	C423
2203-000438	C426
2203-001072	C427
2404-001225	C500
2203-000278	C501
2203-000311	C502
2203-001405	C503
2203-000628	C504
2203-005061	C505
2203-000438	C506
2203-005061	C507
2203-005509	C508
2203-000812	C509
2203-001630	C511
2203-000812	C513
2404-001151	C515
2203-000812	C516
2203-000233	C517
2404-001151	C519
2203-000812	C520
2203-006053	C521
2203-006053	C522
2404-001151	C523
2203-000812	C524
2203-000233	C525
2203-000812	C526
2203-006053	C527
2203-000438	C528
2404-001105	C603
2203-005482	C604
2404-001225	C636
2203-005482	C637
2203-000278	C639
2203-000278	C641
2203-005065	C644

SEC Code	Design LOC
2203-005065	C645
3710-001673	CN401
3711-005397	CN402
3709-001187	CN502
3722-002067	CN503
3705-001287	CON101
0404-001189	D100
0401-001033	D201
2901-001260	F401
2901-001260	F403
2901-001260	F404
2901-001260	F405
3301-001659	F406
2203-005288	L101
2703-001876	L102
2703-002324	L103
2703-002372	L104
2703-002207	L105
2703-002663	L106
2703-001229	L201
3301-001208	L202
2703-000175	L501
0604-001261	LED301
0601-001602	LED401
0601-001602	LED402
0601-001602	LED403
0601-001602	LED404
0601-001602	LED405
0601-001602	LED407
0601-001602	LED408
0601-001602	LED409
0601-001602	LED411
0601-001602	LED412
0601-001602	LED413
0601-001602	LED414
0601-001602	LED417
0601-001602	LED418
0601-001602	LED419
0601-001602	LED420

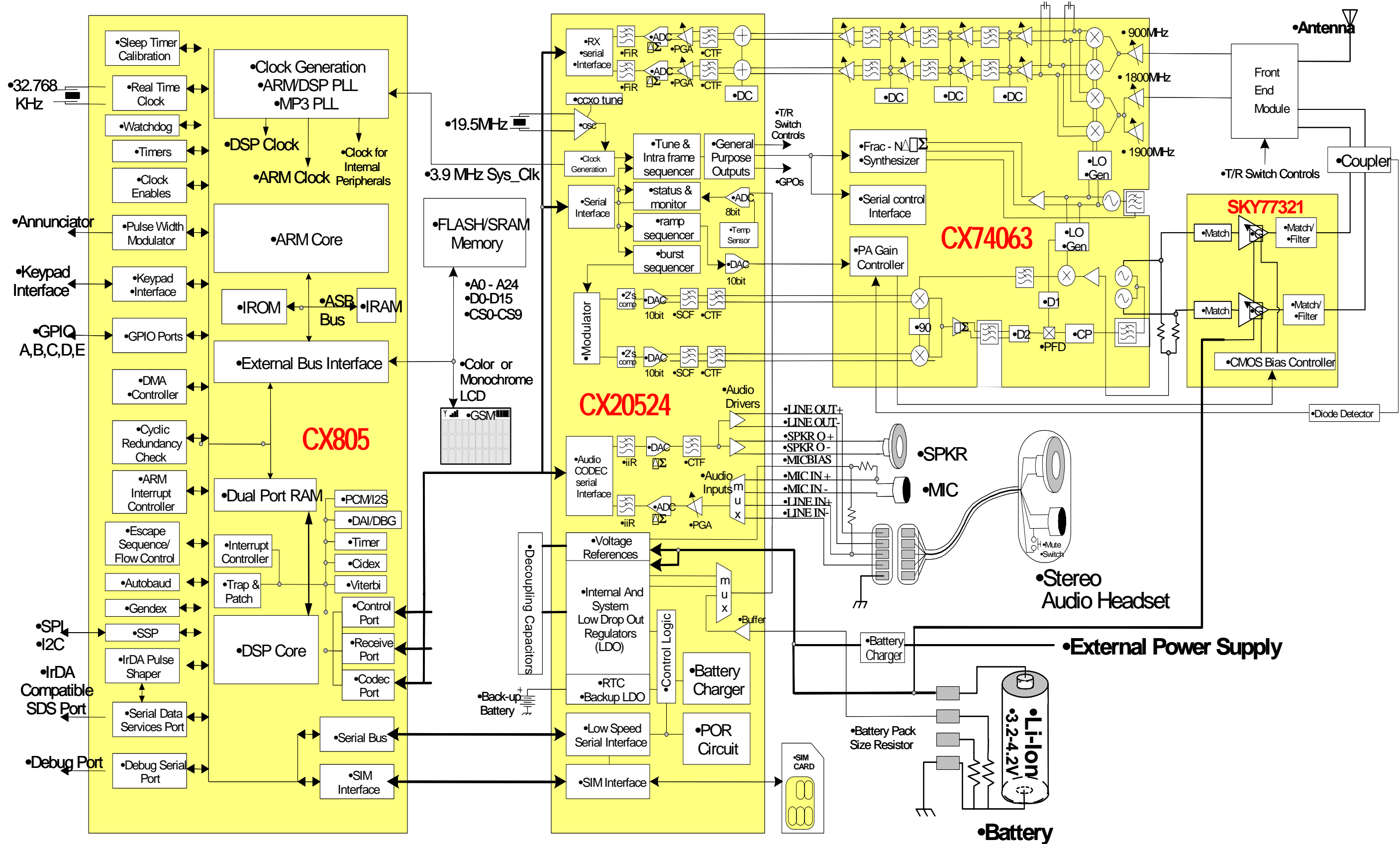
SEC Code	Design LOC
2801-004191	OSC201
2801-003856	OSC301
2801-004285	OSC601
GH41-00510A	PCB
0504-001171	Q501
0504-000172	Q601
2007-007142	R100
2007-000172	R101
2007-000171	R102
2007-007142	R103
2007-007138	R104
2007-007314	R105
2007-001298	R106
2007-007766	R107
2007-000171	R108
2007-000172	R109
2007-000172	R110
2007-000172	R111
2007-007319	R112
2007-001298	R113
2007-007564	R114
2007-001298	R115
2007-001313	R116
2007-000172	R117
2007-007134	R118
2007-007155	R119
2007-000171	R120
2007-007142	R123
2007-007142	R124
2007-000138	R200
2007-008275	R201
2007-000775	R202
2007-007092	R203
2007-000242	R204
2007-007092	R205
2007-000141	R206
2007-000171	R207
2007-000137	R208
2007-000153	R209

SEC Code	Design LOC
2007-007766	R210
2007-007573	R211
2007-001335	R212
2007-000148	R213
2007-000148	R300
2007-000148	R301
2007-001325	R302
2007-000162	R304
2007-000157	R305
2007-000170	R306
2007-001291	R307
2007-000171	R308
2007-000162	R309
2011-001344	R400
2007-000138	R401
2007-000138	R402
2007-000138	R403
2007-000171	R404
2007-000171	R405
2007-007096	R407
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2007-007096	R409
2007-007096	R410
2007-007096	R411
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2007-007096	R420
2007-007096	R423
2007-007096	R424
2007-007096	R425
2007-007096	R426
2007-007179	R427
2007-000163	R500
2007-000161	R501
2007-000775	R502

SEC Code	Design LOC
2007-000171	R503
2007-001325	R504
2007-000172	R505
2007-000172	R506
2007-001292	R507
2007-000140	R508
2007-000140	R510
2007-000140	R511
2007-000566	R512
2007-001292	R513
2007-000140	R514
2007-007155	R515
2007-007697	R516
2007-000171	R517
2007-000758	R518
2007-000143	R603
2007-000143	R605
2007-000171	R606
2007-000171	R607
2007-000171	R608
2007-000140	R610
2007-000170	R611
2909-001226	U100
1201-002066	U101
1205-002418	U102
4709-001144	U103
1203-002689	U201
1204-002185	U202
1209-001497	U203
0504-001162	U204
0504-001162	U205
1205-002391	U301
1109-001281	U302
1009-001010	U303
1203-002690	U304
1203-002860	U401
1003-001547	U402
1001-001183	U501
1204-002138	U502

SEC Code	Design LOC
1205-002463	U602
1203-002236	U603
1203-003106	U607
4302-001130	V201
1405-001082	V301
1405-001093	V401
1405-001093	V402
1405-001082	V403
1405-001082	V404
1405-001082	V405
1405-001082	V406
1405-001082	V407
1405-001082	V408
1405-001082	V409
1405-001082	V410
1405-001082	V411
1405-001082	V412
1405-001082	V413
1405-001082	V501
1405-001082	V502
0403-001427	ZD201
0403-001387	ZD301
0406-001190	ZD401
0406-001190	ZD402
0406-001190	ZD501

5. SGH-P510 Block Diagrams



2. Main PCB Bottom Diagram

